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After 15 Months of Bush

Science Policy: Glorious Rhetoric and a Big Muddle

The frequent public statements and forthright manner of White House Science Adviser D. Allan Bromley have created an impression of an Administration dedicated to the wise cultivation and use of the nation's science resources. But 15 months into the Bush Administration, precious little shape or coherence have been introduced into the sprawling muddle of science-policy affairs left behind by the Reagan Administration.

Bromley's White House base, the Office of Science and Technology Policy (OSTP), has spawned a network of impressive-sounding committees with charters to coordinate research across the span of federal R&D activities. But Washington is overrun with interagency committees of one sort or another. In the case of OSTP's brood, collectively titled the Federal Council for Science, Engineering, and Technology, there is little to indicate an effective connection to the levers of government. As for Bromley's advice influencing decisionmaking by the President and his inner politi-

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cal circle, particularly Chief of Staff John Sununu, the evidence is scanty. From its vacillating response to global change to its evasion of international agreements on the space station, the Administration has made scientific judgments secondary to political and economic considerations.

On the most politically turbulent issue in science-policy affairs, the proper role of the federal government in promoting high-tech industry, the Bush Administration remains as confused and adrift as the day it arrived. Several recent episodes indicate that no policy has evolved for dealing with the issue, and if anyone is in charge, he or she is well concealed.

The *de facto* US Department of Industry and Technology is, of course, the Pentagon, which for decades has underwritten important segments of industrial technology with an operational and financial liberality denied other government agencies. DOD, however, is a house divided on its self-assumed industrial role, especially now that budget restraints are cutting into troop levels and development of weapons systems. Earlier this year, the Pentagon's pro-industry wing leaked a report that DOD planned to terminate its $100-million-a-year subsidy for Sematech, the industrial-research consortium it fathered to keep alive the American semiconductor manufacturing industry. Under editorial and Congressional criticism, Defense relented and agreed to remain Sematech's angel.

But cross currents still prevail on the Pentagon's industrial role. Last week it was disclosed that the Defense Advanced Research Projects Agency (DARPA), DOD's main high-tech venture-capital operation, has been ordered to sharply reduce its planned program to provide $30 million for research on high-definition television. HDTV was the hottest high-tech issue last year on Capitol Hill, where, at several hearings, Members berated the Administration for passively tolerating Japan's big lead in the field.

Whether in response, or by coincidence, DARPA then announced its program. Though only $30 million a year, which won't underwrite much of an effort in that line of research, the DARPA announcement took much of the

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In Brief

It might be assumed that a Nobel Prize and 45 patents would qualify a scientist for election to the National Academy of Sciences, the honorary apex of American science. But the self-perpetuating brethren who run the place (it's 96.3 percent male) are sometimes hard to please. Gertrude B. Elion, scientist emeritus, Wellcome Research Laboratories, North Carolina, shared the 1988 Nobel for medicine with her research collaborator, George H. Hitchins, an NAS member since 1977. She holds a host of other prizes and the aforementioned number of patents, but is still not in the Academy. The next opportunity to end this disgrace comes April 24, when the Academy announces the election of new members.

Will Europe's progressing amalgamation lead to fewer of its students enrolling in US universities? The possibility has been raised by several scientific leaders, including White House Science Adviser D. Allan Bromley (SGR, March 15). But with Europe's borders already falling, the latest figures from the American Council on Education show its students in the US rose from 38,820 in 1987-88 to 42,770 in 1988-89. They're still a small slice of total foreign enrollments—which numbered 366,354 last year, of which 52 percent came from Asian countries.

Former NIH Director James B. Wyngaarden, serving since October as Assistant Director for Life Sciences at the White House Office of Science and Technology Policy (OSTP), will leave that post July 1 to become Foreign Secretary of the National Academy of Sciences, a halftime job to which he was recently elected. Wyngaarden says he'll also be working on a new edition of a medical textbook. Meanwhile, OSTP Director Bromley is shopping for a replacement for Wyngaarden.

. . . Pentagon Back and Forth on Industrial Support

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steam out of Congressional concerns because it seemed to indicate a softening of the Administration's ideological resistance to helping high-tech industry.

However, the program never got started, because of foot dragging within the Office of Management and Budget, where the HDTV program was seen as a backdoor venture into "industrial policy." Whatever that means, it is anathema to many of the people around George Bush, who puts a derisive twist on the term when he speaks of the wonders his Administration will perform for industrial competitiveness.

Now, according to the *New York Times*, the DOD Under Secretary for Acquisition, John A. Betti, has proposed diverting $20 million of DARPA's yet-to-be-released HDTV money to other purposes. Four million of the HDTV dollars would go to finance a study of DOD's acquisition methods and an unspecified amount would be for economic assistance to Panama and Nicaragua.

The Administration's reported turnabout on HDTV caused an expectable torrent of Congressional bombast. Rep. Mel Levine (D-Calif.), a member of the Foreign Affairs Subcommittee on International Policy and Trade, called the decision "outrageous and irresponsible." Senator Albert Gore Jr., Chairman of the Commerce Subcommittee on Science, Technology, and Space, warned against neglecting a technology with major military applications.

Several days later, with the Pentagon's role in HDTV still unclear, DARPA announced a new venture in its support of industry—$4 million for a small firm working on gallium arsenide computer chips, Gazelle Microcircuits, of Santa Clara, Calif. The DARPA support was not in the customary form of a grant or contract, but, as part of a Congressionally sanctioned two-year experimental program, was along the lines of an "investment" that could be repaid with profits or royalties. DARPA officials noted that the firm was low on cash and had been talking to potential Japanese investors.

While the Administration continues to issue contradictory signals on help for industry, the Congress is spiritually keen to proceed with major support, though there's little loose money for the cause. The House Science, Space, and Technology Committee recently voted 49-0 to authorize the Commerce Department to award $100 million for HDTV research projects in the fiscal year that starts next October 1 and $250 million in the following year.

But an authorization is merely a wish. What's required is an appropriation, a far more difficult matter with another Gramm-Rudman-Hollings budget crunch shaping up for late summer. The Science Committee's HDTV measure is therefore in the pipe-dream category, unless there's a massive shift from defense to civilian spending, a distant possibility for which many claimants are already on line.

The money that the Science Committee seeks for HDTV would be channeled through the National Institute for Standards and Technology (NIST), fashioned by Congress two years ago from the old National Bureau of Standards to serve as the principal federal agency for boosting civilian research. But, as reflected in SGR's interview April 1 with the newly installed Director of NIST, John Lyons, the agency is financially hobbled.

The NIST Advanced Technology Program (ATP), designated by the Science Committee bill to administer the HDTV money, is a threadbare operation. Budgeted for no funds at all last year by the Bush Administration, ATP got $10 million from Congress, but not even that sum has been spent. Bush has come around to the extent of requesting $10 million for the program in next year's budget. But if ATP gets the money, other parts of NIST are bound to suffer, unless the overall budget for the agency is substantially increased. The prospect of $100 million and later $250 million for HDTV becomes dim when viewed against the fact that the Administration's proposed budget for all of NIST next year is $198 million.

The Administration's response to the needs of civilian industry was assailed last month by one of Mr. Bush's fellow Republicans, Rep. Sherwood Boehlert, of New York, who caustically described a policy wasteland on science-related issues. Noting an upcoming report from the General Accounting Office (see In Print, P. 8), Boehlert said, "The results of the metrification effort are virtually nil. The [Commerce Department's] Clearinghouse on State and Local [high-tech] initiatives, after wasting past appropriations on useless consultant's reports, is still unable to put together a working program without pinching scarce funds from NIST.

"The Japanese Technical Literature Program," Boehlert continued, "tries to keep track of scientific output from the world's second largest economy with two people—and that's counting generously." He also noted the sinking condition of the National Technical Information Service (NTIS), which is supposed to serve as the central distributor of reports emanating from government-supported research. But as was brought out in a hearing by the House Science Committee (SGR, March 15, "Declining Balance at the

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Lobby Congress to Back Science, Bromley Urges

The word from D. Allan Bromley, the President's Science Adviser, is that scientists "really have a friend in the Bush Administration." The problem is with Congress, he said last week, and scientists should personally lobby there to increase the flow of money for research, especially for small science.

He didn't add that if they do, they're likely to collide with White House lobbyists striving to hold down research spending, since the Democratic Congress is generally, though not always, ahead of the Bush Administration in eagerness to support research. Nonetheless, the message putting the onus on Congress seemed to go over well as Bromley gave an earnest and persuasive keynote address April 12 to the 15th annual Research and Development Colloquium of the American Association for the Advancement of Science. The meeting drew an audience of about 400, many from far away, eager for what the annual pow-wows purport to deliver: an inside look at national science policy and its managers.

Bromley took his listeners on a table-of-organization tour of the White House science-advisory apparatus, describing in detail the reorganization and upgrading of the Federal Council for Science, Engineering, and Technology (FCSET), and the newly constituted President's Committee of Advisers on Science and Technology (PCAST). FCSET, he confided, had sunk to a low state in the past Administration, but under his regime, its membership consists of cabinet secretaries and agency heads from government organizations with major R&D responsibilities.

The new FCSET, he continued, would focus on seven major areas: earth and environmental sciences; human resources and education; food, agriculture, and forests; international science and technology; life sciences; the physical sciences and mathematics, and technology and industry. The new committees, Bromley stressed, are headed by very senior officials, including some cabinet chiefs.

The President's advisory committee has held two meetings, both attended by the President, Bromley noted, and the committee would soon move to a monthly meeting schedule.

Turning to science-policymaking in the White House, Bromley said that purely scientific questions are settled within the science office or FCSET, but on matters in which science is a component among others, the decision can go all the way to the President. He assured his listeners that he has a "gentlemen's agreement" for close coordination with Richard Darman, Director of the Office of Management and Budget.

Under the agreement, he said, three criteria guide science spending: relevance to national security, support for basic research, and provision of major facilities for research.

Having described what is probably the densest assemblage of committees in the federal establishment, Bromley nonetheless conceded that all is not well. For the first time ever, he noted, the award rates at the National Science Foundation and the National Institutes of Health have fallen below 30 percent.

He said that the problem would receive "special attention" in the 1992 budget. A member of the audience pointed out that that's a long way off, and many researchers might go under in the meantime. Bromley agreed.

In urging the audience to lobby Congress, Bromley explained that in the appropriations process, NSF is bunched with Housing and Urban Development and the Department of Veterans Affairs, both of which, he noted, are supported by organized and active constituencies. He added that Barbara Mikulski (D-Md.), Chairman of the Senate Appropriations Subcommittee for NSF, had remarked to him that she hears regularly from HUD and VA boosters, but rarely ever from scientists.

Looking ahead, Bromley said that OSTP plans to focus on several areas, including science and technology for economic growth, global change, expanded access to high-speed computing, biotechnology, and materials science and engineering. He described the latter as an orphan among scientific disciplines and federal agencies, despite its great economic importance.

On the federal role in industrial technology, Bromley said that over the past six months, the Bush Administration has shifted federal policy to provide support for enabling technologies and generic technologies—terms applied to research short of product development. But he argued that the federal government is opposed to "industrial policy," a term that he paired with attempting to pick "winners and losers" in the marketplace. He reported that the Defense Department has recently prepared a list of important technologies and that the Commerce Department is working on its own list. "We will merge them and decide what to do," Bromley said.

In the question period, Bromley agreed that the US has a reputation as an "unreliable partner" in carrying out big international R&D projects, such as the Space Station. Much of the blame, he said, is attributable to the uncertainties of the annual appropriations process. He said his office is studying the possibility of underpinning big international projects with treaties.

In response to a question about the relative performance of the Congress and the White House in supporting research, Bromley correctly noted that Congress has thwarted bigger budgets for NSF, but agreed that in other areas it has been a strong booster of the science agencies, particularly NIH.

SSC Backers Advance With a Craftily Worded Bill

With an authorization bill for the Superconducting Super Collider (SSC) rammed through the House Science, Space, and Technology Committee (SGR, April 1), the big project has cleared an important hurdle. In the process, it has acquired a good deal of political momentum for running the perilous and unpredictable appropriations gantlet. The economic and intellectual challenges to the SSC have shrewdly been evaded. But the odds for proceeding are increasingly favorable, for the proponents are politically very skilled. As has often been the case throughout the SSC's four years of gestation, their latest advance was achieved with a barrage of syrupy assurances of dubious validity. But it worked.

The troublesome issue to be dealt with when the Committee took up the authorization bill March 27 was the recent announcement that the estimated cost of the SSC had risen to around $8 billion, mainly because of design and production difficulties with the 10,000 supercooled magnets to be housed in its 54-mile tunnel. That's about $2 billion more than had long been stated by the Department of Energy as a reasonably firm figure. In a Congress cramped and irritated by deficit-cutting pressures and a rising clamor for more domestic spending without tax increases, a price rise of that size in a project yet to break ground was inevitably worrisome.

Typical of the middle ranks on the SSC, Rep. Tom McMillen (D-Md.) said he favored it, but was worried about the cost increases. Another supporter, Rep. George Brown (D-Calif.), said he has "faith" in the SSC and urged going ahead, though he stressed concern about what he described as a lack of national policy on spending for big and little science and on civilian industrial needs.

But the impresario of the SSC hearing, Chairman Robert Roe (D-NJ), a tireless booster of R&D mega-projects, had a ready answer for these handwringers, as stated in a press release distributed on the morning of the hearing: "Federal contributions would be capped at $5 billion. Texas [site of the SSC] will provide $1 billion with the remainder of the funding coming from the international community and any other state or industry sources."

The Texas billion was long ago assured by that state's enthusiasm to land the project and its willingness to kick in a sweetener beyond the resources of the other finalists in the SSC site competition. But the $5 billion federal "cap" and the stated expectation of support from "the international community" are vaporous—in the SSC tradition of promise 'em anything, so long as the project keeps moving.

The proposed cap has a superficial appeal because it is novel if not unique for proponents of an expensive federal project to take the pledge beforehand. Most federal undertakings are implicitly capped by authorization ceilings, but the ceilings are well understood to be subject to revision, and

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Main US R&D Data Bank"), NTIS is withering away. The reason: It is largely ignored by the federal agencies that are supposed to send in their papers, and NTIS can't compel delivery. Perhaps salvation is on the way from one of the interagency coordinating committees under the auspices of the Federal Council for Science, Engineering, and Technology. If so, word has not leaked out.

Boehlert also brought up another Congressional creation within the Department of Commerce, the Technology Administration, for which the Administration did not appoint a chief until last month (SGR, April 1). "While the programs of the Technology Administration are small," the Congressman said, "they are essential to the rebuilding of the nation's manufacturing base. Yet these programs, like their complementary numbers at NIST, continue to get short shrift."

In health research, the good fortune of the nation is that the National Institutes of Health continues to function well despite the managerial and policy ineptitudes of the Bush Administration. But the prolonged delay in appointing a new Director for NIH has created a feeling of political friendlessness and uncertainty in biomedical affairs. This has been intensified by federal restrictions on fetal-tissue research (see P. 6), which were decreed by the pro-life zealots in the Department of Health and Human Services. Bromley says he wasn't consulted about the research ban, a frank but disquieting admission from the federal government's top official for science policy.

An often-asked question, particularly among the many foreign sci-tech visitors who troop through Washington, is whether more coherence is bound to come to American science and technology policy. The answer would be yes, if Congressional Democrats could have their way. They are brimming with various schemes for boosting civilian industrial research, science education, and various other neglected aspects of federal concern. The Congressional hopper always contains a pile of Democratic bills for expanding the federal role, with one of the leading favorites being a technology counterpart to the National Science Foundation.

But while it is possible to impede or stop government activities from Capitol Hill, it is close to impossible to start or run them from that vantage point without strong public support. In health-related matters, Congress has that support and uses it to maintain control over the NIH budget, regardless of what the White House wants. But nothing comes close to health research in terms of public anxieties and support.

The neglects and contradictions in federal science affairs dismay and inspire Congressional Democrats. But the big opportunities for change are controlled by the White House, which is reluctant to budge from the status quo.—DSG

. . . Spending "Cap" Is Seductive but Meaningless

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commonly are lifted to provide more money.

But a cap explicitly written into the authorizing legislation? Whatever its standing in the legislative process, the cap, as proposed by Chairman Roe, conveyed an impression that the SSC's costs were now foreseeable and under control. Roe sought to reinforce this impression by reporting that he had discussed his authorization proposal with the White House Science Adviser, D. Allan Bromley, and with officials of the Office of Management and Budget, and they had approved.

The flimsiness of the cap scheme was pointed out by Rep. Don Ritter (R-Pa.), a rare science PhD on Capitol Hill, who has long, and futilely, lamented federal neglect of research that could help high-tech industry. If more is needed after the $5 billion is exhausted, Ritter said, the SSC backers will return for additional support, and there would be nothing to prevent Congress from providing it. The difficulties with the magnets, he said, should be solved before Congress commits itself to proceed. Ritter noted that after several years of soliciting foreign support, DOE has failed to get anything. (The Department says that India has pledged $50 million worth of engineering services.)

Rep. Sherwood Boehlert (R-NY) tried to counter Roe's authorization bill with a measure that would withhold all funds for construction until the magnet problems were fixed. Chairman Roe responded derisively to this and other suggestions for a go-slow approach, insisting on a provision in his bill that would provide $1.7 billion for developing and testing the magnets on site. At one point, Roe shouted, "It's better to kill the SSC than not be decisive." Challenging the argument that, given the technical problems of the project, an authorization bill was premature, Roe declared that passage of the bill was "the right thing to do." He described his bill as "fair, right, and just," adding, "Let's go ahead or cancel. But don't let's linger in the swamps."

At times, Roe presented an impression of being out of control. Raising another challenge to his opponents, he declared that if construction were held up pending solution of the magnet problems, the SSC costs would rise by $1.5-$2 billion and the project would be delayed by 18 months.

Rep. Robert Walker (R-Pa.), the ranking Republican on the Committee, said he had never before heard this gloomy forecast, despite close contacts with the SSC's managers.

Roe angrily responded by asking whether his truthfulness was being challenged. Then, exercising the power of the chairmanship, he changed the subject.

By a vote of 32-9, the Committee adopted what was termed a compromise between the Roe and Boehlert bills, but the outcome was heavily weighted toward the Chairman's goal of moving along with the SSC, rather than waiting for magnet problems to be finally solved. As specified in the bill, the magnet technology must be "successfully demonstrated" before 80 percent of the funding is released. The meaning of "demonstrated" is not spelled out.

The issue of foreign financial participation is similarly vague. With the federal contribution capped at $5 billion and Texas in for $1 billion, the requirement for foreign shares in the now-$8 billion project are set at no less than 20 percent and no more than 33 percent of the total cost. But after years of rattling the tin cup in foreign capitals, DOE has come up with nothing but India's offer of scarcely needed engineering services.

As passed by the Committee, the bill states the final $3.3 billion of the federal $5 billion cannot be released until the DOE Secretary certifies that the US has secured the required commitments "from international sources." That appears straightforward on the face of it, but SGR is advised by one person close to Roe's Committee that the issue of foreign contributions is not as clearcut as some would like it to be. SGR's source described it as "a very sensitive issue around here. No one wants to talk about it and just forget that you talked to me about it." On the other hand, Roe's Staff Director, Robert Ketcham, insisted to SGR that the requirement for international money is firm and clear.

Throughout the SSC odyssey, the mirage of foreign support has proven invaluable for the SSC backers in their quest for federal planning and startup funds and a formal authorization for the project. With nothing to show, they have repeatedly assured deficit-plagued members of Congress that other nations will pay a major share of the SSC's costs. "The prospects for foreign participation not only are good, they are excellent," DOE Secretary John Herrington told Congress in March 1988. He predicted that 45 to 50 percent of the SSC would be financed by Europe and Japan.

The Bush Administration has less grandiose visions of foreign support, but it still holds out the promise of Japanese money, while quietly conceding that Europe is a very unlikely prospect.

The Japanese remain publicly silent about their intentions, but they have indicated that they might sign on if they get the contract to build the SSC's magnets. Given the industrial learning experience that would be involved in that enterprise, the Administration has been cool to the Japanese ploy.

Europeans beg off, earnestly pointing out that they're heavily committed to an expansion program at CERN, their own high-energy research center, near Geneva, while expressing best wishes for the American project. But in home ministries and in embassies in Washington, European science and technology officials look with amusement on America's efforts to hustle foreign science money while American science policy flirts with protectionist measures.

Europeans recall the Reagan Administration's strings on sales of high-power computers and Reagan's exclusion of foreigners from a major meeting in Washington on high-

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HHS Continues Ban on Fetal Tissue Experiments

The anti-abortion clique retains its hold on policymaking at the Department of Health and Human Services (HHS), continuing an embarrassment that has repelled candidates for the directorship of the National Institutes of Health and caused dismay in health-policy circles.

The enduring grip of the hardliners was flaunted April 2 by James O. Mason, HHS Assistant Secretary for Health, who told a House hearing that the Department would retain its ban on federal funds for experimental transplantation of fetal tissue from induced abortions. Mason's testimony came shortly after reports from Sweden about favorable results in treating Parkinson's disease by transplanting fetal tissue to the patient's brain.

Testifying before an exasperated and incredulous Henry Waxman (D-Calif.), Chairman of the Commerce Subcommittee on Health and the Environment, Mason said widespread therapeutic use of fetal tissue might "tilt some already vulnerable women toward a decision to have an abortion." Last year, in announcing the continuation of the ban, which had been initiated in the waning days of the Reagan Administration, Mason deemed it "a matter of heart and mind as well" (SGR, November 15, 1989, "Abortion Foes Keep Grip on NIH Research Policy").

Waxman, joined by other Members and witnesses from health-related organizations, countered that there was no evidence to support Mason's assertions about a relationship between transplantation and abortion decisions. They noted, too, that an advisory panel appointed by HHS had addressed the possibility of beneficial use of the tissue influencing a mother's decision on abortion. In recommending federal funding for research, the panel said that complete anonymity should be maintained between donor and patient and that informed consent should be required to use the tissue for transplants.

Mason, a tough performer in the witness chair, adamantly stood by his position, leading Waxman to say, "The policy is comparable to banning life-saving organ transplants to limit traffic accidents, and it is equally ludicrous."

What makes it more ludicrous is that the number of voluntary abortions is far beyond any current or foreseeable need for tissues for therapeutic transplants. There is virtually no likelihood of an abortion dilemma being influenced by the belief that tissue needed for good works is in short supply. But the abortion opponents remain dug in, and some have even suggested that a medical market for fetal tissue might lead to pregnancies destined at the outset for mercenary termination.

The HHS ban does not apply to non-federal sources of medical-research funding. But if private funds are in the field, there's little talk about it, and understandably so, given the vituperativeness of abortion politics.

Current federal policy permits use of fetal tissue from induced abortions for non-transplant research, such as studies of cell development, apparently on the premise that such research could be beneficial for carrying high-risk pregnancies to term. Use of fetal tissue is also permissible in what Acting NIH Director William Raub referred to as "established

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Super Collider

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temperature superconductivity at the same time the US was seeking European cash for the SSC. Those episodes are getting to be a long time back. But now angrily fresh on European minds is NASA's unilateral "descoping" of the manned space station, to the detriment of foreign partners who have spent several billion dollars on their share of the project since NASA lured them aboard. Asked about this and similar episodes, Science Adviser Bromley told a conference on Europe 1992 recently that the US must indeed work to overcome a deserved reputation of being an "unreliable partner" (SGR, March 15, "US, EEC Leaders Ponder Impact of '92 on Science").

Though the SSC proponents, particularly in DOE and Congress, have cheerfully and successfully used the foreign-aid gambit to sell the project politically, doubts about money from abroad were early and clearly expressed by people who know the financial realities of high-energy physics. In 1985, for example, the SSC Board of Overseers of the University Research Association, which manages the project for DOE, reviewed the prospects for foreign support and concluded with what it described as a "pessimistic assessment." Noting that Europe and Japan faced their own burdens in financing high-energy physics, the Board said international support might flourish "as the result of a decision by the President of the United States together with foreign chiefs of government to designate the SSC as a joint undertaking to supplement national programs, to serve as a spectacular demonstration of international amity."

Obviously not optimistic on that matter, the Board went on to state: "We conclude that international collaboration cannot provide a major offset to the US-borne construction costs for the SSC unless substantial new resources beyond those presently foreseen are provided to European and/or Japanese high-energy physics programs."

The Roe authorization specifies a substantial foreign contribution. But it doesn't say when it's to come. And if it doesn't ever come, the SSC proponents will still manage to keep the project alive and moving. The greatest danger to the SSC would be a cost increase far beyond the present cap of $5 billion in federal funds. Given the tendency of high-tech projects to far exceed original price tags, $8 billion is almost surely not the end of it. The cunning of the Roe strategy is that many billions will have been expended before it's clear that much more is needed, at which point the backers will argue that too much has been spent to stop now.—DSG

. . . A Dour Spillover Effect on Quest for NIH Chief

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treatments," of which there are very few of that nature (SGR, March 1, "Raub Explains Ban on Fetal Tissue Research"). But NIH officials say that very little in research or treatment is going on, at least with their funds.

Raub said he understood that one NIH-supported research group was continuing to work with fetal tissue, but that another had voluntarily suspended its work.

Mason's reiteration of the fetal-tissue ban comes as an advisory panel appointed by HHS Secretary Louis Sullivan is soon to recommend ways to upgrade the post of NIH director, vacant since the Bush Administration forced James B. Wyngaarden to resign last August. The explanation for the ouster was that the new Administration wanted to install its own choice at the helm of the world's leading biomedical research organization. But Mason and company chilled the short list by applying the so-called litmus test on the abortion issue.

Curiously, a good deal of public discussion of NIH's woes has centered on the Director's salary, about $100,000, which is very low in the health-care and medical-research economy. But people who are knowledgeable about the quest for a new Director and the candidates considered most desirable insist that money is the least of the problems. The real issue, they say, is the danger of humiliating intervention from the entrenched anti-abortion ideologues at HHS. A common view is that without an ironclad assurance of protection against their depredations, first-class candidates will continue to shun the job.

The great disappointment in this tawdry affair is HHS Secretary Sullivan. His stumbling performance during his first year was excused on grounds of political inexperience. He later helped himself to a public relations boost by attacking one of the safest targets on the national scene, the tobacco industry, which has rapidly declined in public sympathy and political influence.

But Sullivan has quietly stood by while Mason has truculently waved the anti-abortion flag over federal health policy. It makes you wonder who's in charge and why anyone of stature would want to serve as Director of NIH, a position that reports to Assistant Secretary of Health Mason.—DSG

AID Researcher Sentenced

James M. Erickson, head of malaria-vaccine research at the Agency for International Development from 1982 to 1987, has been fined $25,000 and sentenced to eight months of work-release in a federal halfway house after pleading guilty to three felony counts arising from his management of the program (SGR, March 1). He was also sentenced to three years probation.

The counts charged him with a concealed financial interest in an AID subcontracting firm; receiving a $20,380 "gratuity" from another firm doing business with AID, and failure to report $68,380 on his 1986 federal income tax return. Nine other counts were dropped in a plea-bargain agreement, including several that charged Erickson with receiving kickbacks on purchases of monkeys for malaria research.

In a long-running feud with AID, Erickson had depicted himself as the victim of bureaucratic vengeance for bringing charges of financial misconduct against AID's major contractor for operating the malaria program, the American Institute of Biological Sciences (AIBS). The General Accounting Office last year faulted Erickson's management performance and AIBS's handling of program funds (SGR, Nov. 1, 1989). Following a long investigation, the only charges brought by the Justice Department were against Erickson.

Erickson pleaded guilty February 1 and was sentenced April 6 in US District Court, Alexandria, Va.

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gests greater emphasis on prevention. Included are summaries of the methods employed by various European countries in dealing with oil spills. Stating that it was "impressed with the total amount of equipment available in Europe" for responding to spills, OTA notes that "On the whole. . . European countries are better organized than the United States, have more resources on which to draw, and conduct more frequent training exercises." The report was requested by Senator Ted Stevens (R-Alaska) and Rep. Bill Tauzin (D-La.), Chairman of the Subcommittee on Coast Guard and Navigation, Committee on Merchant Marine and Fisheries, following the *Exxon Valdez* oil spill.

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In Print: Energy Plan, Metric Dawdling, R&D Funds

The publications listed are obtainable as indicated—not from SGR.

National Energy Strategy: Interim Report (230 pp., no charge), subtitled "A Compilation of Public Comments," here's a volume so dense that it includes a section titled "How to Read this Report." But it's still tough going. Emanating from the first stage of an ambitious, little-publicized, and probably futile effort by the Department of Energy to devise a "national energy strategy," the report is presented as a distillation of 12,000 pages of testimony and papers collected during 15 public hearings DOE has held around the country since August 1989—essentially a town-meeting charade as a substitute for leadership. The report invites comments on the comments, and provides instructions on where to send them. Listed, too, are addresses of 14 DOE reading rooms where *all* the papers are available. A "first edition" of the strategy will be submitted to the President in December, according to DOE Secretary James D. Watkins.

Order from: USDOE, Office of Public Inquiries, Room 1-206, Mail Stop PA-5, Washington, DC 20585; tel. 202/586-6540.

Metric Conversion: Plans, Progress, and Problems in the Federal Government (GAO/RCED-90-131; 45 pp., no charge), another look at America's endless saga of metric non-conversion, this one, by the General Accounting Office (GAO), says federal agencies "have not demonstrated a commitment" to the metric goals specified in the 1988 Omnibus Trade and Competitiveness Act. GAO, the investigative service for Congress, notes that "to the extent economically feasible," federal agencies are required to go metric by September 1993, but found only slight progress toward that goal. The culprit, GAO reports, is the assigned leader of the task, the Department of Commerce, whose dawdling performance was cited by other agencies as the reason for their own inactivity. The metric review, requested by Chairman Robert Roe (D-NJ), House Science, Space, and Technology Committee, found that only six of 37 federal agencies have completed guidelines for conversion.

Also from GAO: ***US Weapons: The Low-Intensity Threat Is Not Necessarily a Low-Technology Threat*** (GAO/PEMD-90-13; 24 pp., no charge), report requested by Rep. John Conyers Jr. (D-Calif.), Chairman, House Committee on Government Operations, states that little wars and regional conflicts increasingly involve high-tech weaponry both locally produced and obtained from major powers. GAO warns, "The weapons that US armed forces may encounter in future LIW (Low-Intensity Warfare) span the range of military technology that exists throughout the modern world; that is, it is not just poorly equipped opponents we face." GAO adds that "the weapons we face may be our own."

Order from: USGAO, PO Box 6015, Gaithersburg, Md. 20877; tel. 202/275-6241.

Probable Levels of R&D Expenditures in 1990: Forecast and Analysis (24 pp., no charge), annual report from Battelle, the industrial consulting and research firm, derived mainly from standard NSF data, provides a compact survey of R&D spending and performance trends in government, industry, and academe, along with a forecast of real expenditure growth of 2.1 percent for calendar year 1990. Included is a 1960-to-1990 "cost of research index" for the three sectors. Re the big picture, Battelle says that "during the next few years real R&D activity will increase at an average annual rate of approximately 2.6 percent, slightly lower than recent behavior, but maintaining a generally upward trend."

Order from: Harry Templeton, Editor, *Battelle Today*, Battelle, 505 King Ave., Columbus, Ohio, 43201; tel. 614/424-7818. Note: Supply is limited.

Coping With An Oiled Sea: An Analysis of Oil Spill Response Technologies (GPO Stock No. 052-003-01183-2; 70 pp., $3.75), by the Congressional Office of Technology Assessment (OTA), says improvements in oil-cleanup technology and operations are attainable and should be pursued, but OTA is not glowing about their effectiveness and sug-

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